AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 2, line 5, as follows:

The techniques which reduce a diameter of an opening in a resist pattern of a contact hole are disclosed in Japanese Laid Open Patent Applications (JP Heisei 11-295904A, JP Heisei 11-119443A and JP Heisei 10-274854A). These techniques enable a shape of the contact hole to be controlled and made smaller by heating the resist pattern at a temperature equal to or more than a softening point of resist. Heating the resist pattern makes the diameter of the opening ~~reduced~~ gradually reduce based on the plastic deformation of the resist pattern.

Please amend the paragraph beginning at page 2, line 16, as follows:

Figs. 1A to 1D are cross sectional views of a main part of a substrate showing a process of a conventional forming method of a resist pattern (JP Heisei 11-295904A). Firstly, as shown in Fig. 1A, resist 111 is coated on a substrate 110. Then, the resist 111 is exposed by irradiating electron beams selectively to the resist 111 from an electron beam direct writing apparatus. Next, as shown in Fig. 1B, after a post exposure bake (PEB) is performed, resist holes 112 are formed by the resist 111 being developed. After that, as shown in Fig. 1C, the resist 111 reflows and is deformed by heat treatment. Finally, as shown in Fig. 1D, resist holes 112' are formed, ~~of which~~ which have a diameter [[is]] smaller than that of the resist holes 112 shown in Fig. 1B.

Please amend the paragraph beginning at page 3, line 4, as follows:

~~However, it is a~~ A problem [[in]]with the above described process[[,]]is that which the dispersion of the dimensions of resist holes becomes wider ~~than before,~~ after the reduction of the resist hole size. The experiment performed by the inventor of the present invention shows

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that the dispersion of 0.02 mm was obtained in a 8-inches wafer in case that the diameter of the resist holes of 0.25 mm diameter is reduced to that of 0.20 mm. Here, the chemically amplified resist UV6 (manufactured by Shipley Far East Company) for KrF excimer laser exposure is used as the resist.

Please amend the paragraph beginning at page 3, line 15, as follows:

~~It is because the~~The resist hole size strongly depends on the temperature of the reflow. The temperature dependence of reduction values of the resist hole size is approximately 0.02 mm/°C in above-mentioned case. When the dispersion of 1 °C in a surface of a hot plate on which the reflow is performed, the dispersion of the reduction values would be 0.02 mm/°C.

Please amend the paragraph beginning at page 5, line 5, as follows:

In conjunction with the above description, Japanese Laid Open Patent Application (JP Heisei 10-55951) discloses ~~the following~~ a baking apparatus~~. The baking apparatus~~ that improves temperature dispersion property of a substrate by supplying heated inert gas on the substrate heated by a heater.

Please amend the paragraph beginning at page 5, line 11, as follows:

Japanese Laid Open Patent Application (JP 2002-64047) discloses ~~the following~~ a manufacturing method of a semiconductor apparatus and a semiconductor manufacturing apparatus. The manufacturing method of a semiconductor apparatus includes: forming a resist pattern on a substrate, forming a refined resist pattern by deforming a shape of the resist pattern, calculating a variation of the resist pattern by detecting a variation of film thickness of the resist or a variation of optical constant of the resist, and stopping the deformation of the resist pattern based on the variation.

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Please amend the paragraph beginning at page 5, line 23, as follows:

When heat treatment of a wafer, on which a resist hole pattern (resist pattern of a contact hole) is formed, is carried out by using a hot plate, temperature of the hot plate before the heat treatment is at treatment temperature and [[in]]stable ~~state~~. Next, when the wafer is set on the hot plate and the heat treatment is started, the temperature of the hot plate decreases temporarily. Then, the temperature control is carried out such that the temperature is recovered to the treatment temperature. Regarding the uniformity of the temperature in the hot plate surface in the stable state, it can be controlled with the dispersion of less than 0.5 °C by using a heat treatment apparatus that has a plurality of heater blocks as described above.

Please amend the paragraph beginning at page 17, line 2, as follows:

The hot plate 20 includes heater blocks 20A, 20B and 20C, which heat the hot plate 20. Each of the heater blocks 20A, 20B and 20C covers a corresponding area in the hot plate 20. Each of them includes a heater 22A and a temperature sensor 21A, a heater 22B and a temperature sensor 21B, and a heater 22C and a temperature sensor 21C, respectively. Each of the temperature sensors 21A, 21B and 21C measures the surface of the corresponding one of the heater blocks 20A, 20B and 20C, where the substrate is very close. Therefore, the temperatures measured by the temperature sensors 21A, 21B and 21C is substantially equal to the substrate temperature~~. Here, the "substantially equal to the substrate temperature" means that~~, i.e., the measured temperature can be used as the substrate temperature for controlling of the heat treatment.

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Please amend the paragraph beginning at page 19, line 12, as follows:

Firstly, the temperature of the heat treatment apparatus 18 is set to the first heat treatment temperature which is the setting temperature of the first heat treatment 11, before the heat treatment of the substrate (the semiconductor substrate on which the certain film is formed) is carried out (step S1). Here, the setting temperature control section 24 outputs the first heat treatment temperature to the temperature control sections 23A, 23B and 23C as the initial setting temperature. Each of the temperature control sections 23A, 23B and 23C controls the corresponding one of the heater 22A, 22B and 22C such that the corresponding one of the heater blocks 20A, 20B and 20C becomes [[in]] the first heat treatment temperature. As a result, the heater blocks 20A, 20B and 20C ~~becomes in the setting temperature (~~become the first heat treatment temperature[[)]] of the first heat treatment 11.

Please amend the paragraph beginning at page 20, line 2, as follows:

After the first heat treatment temperature is set~~setting is finished~~, the substrate on which the resist pattern is formed is introduced on the hot plate 20, and the heat treatment is started (step S2: "starting the heat treatment" shown in Fig. 3). When the heat treatment is started, the temperature of the heat treatment apparatus 18 is decreasing temporally as shown in Fig. 3 because the lower temperature substrate is introduced. However, after that, the temperature control by the control section 25 makes the temperature increase to the setting temperature of the first heat treatment 11 again. Here, each of the temperature control sections 23A, 23B and 23C receives the temperature measured by the corresponding one of the temperature sensors 21A, 21B and 21C. Then, each of them controls the controls the corresponding one of the heater 22A, 22B and 22C such that the corresponding one of the heater blocks 20A, 20B and

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20C become[[s in]] the first heat treatment temperature~~, based on the temperature measuring results~~. The controlling method is exemplified in PID (proportional integral differential) control. The data of the temperature measuring results measured by the temperature sensors 21A, 21B and 21C are stored in a memory section (not shown) of the setting temperature control section 24 with the data measuring (receiving) time.

Please amend the paragraph beginning at page 22, line 3, as follows:

Next, the temperature of the heat treatment apparatus 18 is set to the second heat treatment temperature which is the setting temperature of the second heat treatment 12 (step S5: "setting the heat treatment temperature again" shown in Fig. 3). Here, the setting temperature control section 24 outputs the second heat treatment temperature to the temperature control sections 23A, 23B and 23C as the changed setting temperature. Each of the temperature control sections 23A, 23B and 23C controls the corresponding one of the heater 22A, 22B and 22C such that the corresponding one of the heater blocks 20A, 20B and 20C becomes in the second heat treatment temperature. As a result, the heater blocks 20A, 20B and 20C ~~becomes in the changed setting temperature (~~become the second heat treatment temperature[[)]] of the second heat treatment 12.

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